STANDARD RADIATION SAFETY REQUIREMENTS
ANIMAL STUDY PROPOSALS INVOLVING RADIOACTIVE MATERIALS

The following procedures apply for all work with radioactive materials in animals. If the quantity of radioactive material needed for an experiment exceeds the value in the table of "Limits for Activity in Use Without a Radiation Safety Protocol," then an approved Radiation Safety Branch (RSB) protocol is required.

1. The injection/infusion room and the housing room will each be posted with a "CAUTION RADIOACTIVE MATERIAL" sign throughout the experiment. After the experiment has been concluded, a closeout survey of each room will be performed to ensure that all radioactive materials have been removed and that all areas are:

   <220 dpm/100 cm^2 for beta- and gamma-emitters
   <22 dpm/100 cm^2 if using alpha-emitters

   A copy of each survey, documented on a NIH 88-12 monthly survey form, will be sent to the Radiation Safety Branch. Once it is demonstrated that contamination is below these levels, the Caution sign can be removed if radioactive materials are not going to be used again within 30 days. If radioactive materials are to be used again within 30 days, the room shall remain posted. In addition to the daily survey conducted on the days that radioactive materials are used, a thorough contamination survey must be performed, documented on NIH form 88-12, and submitted to the Radiation Safety Branch once a month.

2. If the injection/infusion room is to remain posted after completion of the experiment, the room will remain locked when unattended only if unsecured radioactive materials or waste are still present. All rooms housing animals which contain radioactive material shall remain locked when unattended.

3. Personnel who will be assisting in the protocol procedures or caring for the animals which have received injections/infusions of radioactive materials will register with the Radiation Safety Branch and complete the required course, "Radiation Safety for Animal Studies" or its equivalent; training specific to the protocol work will be provided by the Authorized User or his/her designee.

4. Personnel dosimeters will be worn during protocol work if appropriate for the type and quantity of radioactive material used in the animal study.

5. Cages used to transport and/or house the animal will be labeled, "CAUTION RADIOACTIVE MATERIAL," with the radionuclide, activity, and date indicated.

6. Cages used to transport and/or house the animals (other than rodents) will be lined with absorbent paper.

7. Cages will be monitored and decontaminated as necessary, and all labels will be removed before the cages are sent to the cage wash area or released for general use.

   For I-125, all cages will be decontaminated to <100 dpm/100 cm^2.
   For I-131, all cages will be decontaminated to <200 dpm/100 cm^2.
   For other beta/gamma emitters, cages will be decontaminated to <1000 dpm/100cm^2.
   For alpha emitters, all cages will be decontaminated to <22 dpm/100 cm^2 of removable contamination.

8. Absorbent paper will be placed underneath the animals throughout the injection/infusion procedure.

9. Absorbent paper will be placed under the cages (except for those housing rodents) in the housing area to prevent the floor from becoming contaminated.

10. Disposable booties will be worn in the procedure room and the animal housing room if there is a significant potential for the floor to become contaminated. Booties will be removed and disposed of as radioactive waste before the individual leaves the potentially contaminated area.

11. After handling contaminated animals, bedding, or cages, personnel will monitor their hands, arms, clothing, and shoes for contamination using an appropriate technique. Any detectable skin or clothing contamination must be cleaned immediately, and the Area Health Physicist must be notified at 496-5774.

12. Specimens (blood, tissue, etc.) collected from the animal after it has received radioactive material will be labeled, "CAUTION RADIOACTIVE MATERIAL" until such samples no longer contain detectable levels of radioactive material above background.

13. Double containment will be used if transporting such specimens to another room or facility for analysis. If necessary, specimens will be shielded to <2.5 mR/hr at 10 centimeters. Samples to be transported off-campus must be processed by Radiation Safety through building 21.

14. Following the injection/infusion of radioactive materials, the animal's excreta, any soiled absorbent paper, and bedding will be collected and disposed of as radioactive waste. The length of time that waste will be collected as radioactive depends on the type and quantity of radioactive material involved, and will be determined by the Authorized User and the Area Health Physicist. Waste will be packaged in a leakproof container labeled, "CAUTION RADIOACTIVE MATERIAL" and bearing a waste tag (NIH 88-35) indicating the radionuclide, activity, and date.

15. Disposable cages will be placed in a leakproof plastic bag or Medical Pathological Waste (MPW) box that is labeled, "CAUTION RADIOACTIVE MATERIAL" and will bear the waste tag indicating the radionuclide, activity, and date.

16. After all i.v. lines, needles, absorbent paper, etc., have been removed, animal carcasses will be packaged for disposal as radioactive waste separately. Sharps and needles must be placed in a separate labeled plastic box for disposal. Carcasses will be placed in a leakproof plastic bag or, for large carcasses, in plastic-lined MPW boxes. The outside of the waste containers will be labeled, "CAUTION RADIOACTIVE MATERIAL" and will bear a waste tag indicating the radionuclide, activity, and date.

17. Carcasses will be stored in a cold room or refrigerator (freezer if storage will be for greater than 24 hours) posted, "CAUTION RADIOACTIVE MATERIAL" until removal by the radioactive waste contractor.

18. Before a necropsy is performed on an animal which received an injection/infusion of radioactive material, the Area Health Physicist will be contacted at 496-5774. He/she will determine what, if any, radiation safety precautions are necessary.